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Applicant : Yoshii et al.

Art Unit : 1643

Serial No. : 09/554,186

Examiner : Arden Marschel, Ph.D.

Filed : May 9, 2000

Title : BIOCHIP AND METHOD FOR USING THE SAME

Commissioner for Patents  
Washington, D.C. 20231

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AMENDMENT AND RESPONSE TO RESTRICTION REQUIREMENT

Sir:

Responsive to the Election/Restriction Requirement Office Action mailed October

03, 2001, Applicants respectfully request consideration of the remarks set forth herein. A response to the Office Action is due November 5, 2001 (November 3, 2001, is a Saturday).

Accordingly, this Response is timely filed.

The following documents are enclosed herewith:

- Postcard
- "Version with Markings to Show Changes Made"

02/27/2002 TPLUNKET 00000003 061050 09554186

01 FC:103

126.00 CH

02/20/2002 AOSMAN1 00000059 09554186

01 FC:103

216.00 OP

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I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

Date of Deposit

November 5, 2001

Signature

Lucille M. Begala

Typed or Printed Name of Person Signing Certificate

Lucille M. Begala

AMENDMENT

Please amend the above-captioned application as follows:

*In The Specification:*

On page 1, after the title, please insert the following paragraph:

B1. --The present application is a 35 USC §371 of PCT/JP99/04459, filed on August 19, 1999, which claims the benefit of priority of Japan patent application no. 255288/1998, filed September 09, 1998. These applications are explicitly incorporated herein by reference in their entirety and for all purposes.--

*In The Claims:*

Please amend the claims as follows:

B2 Sub C1 1. (Amended) A biochip comprising:  
(a) a surface capable of being spotted with a plurality of biopolymers in a predetermined pattern, and  
(b) a storage medium for storing information of the biopolymers to be spotted.

B3. Sub C3 5. (Amended) The biochip of claim 1 or claim 2, wherein the storage medium comprises a semiconductor memory which can read/write information in a non-contact state.

6. (Amended) The biochip of claim 1 or claim 2, wherein the storage medium stores information of spot locations on the biochip surface in relation to information of the type of biopolymers spotted on each spot locations.

7. (Amended) A method for using a biochip, wherein a plurality of biopolymers are spotted on a surface of the biochip in a predetermined pattern, the biochip comprising a storage medium; and information of the spot locations are written to the storage medium in relation to information of the type of biopolymers spotted on each spot location.

*Sub 7*  
B3 8. (Amended) A method for using a biochip, comprising the steps of:  
(a) applying a sample to the biochip, wherein the biochip comprises a surface spotted with a plurality of biopolymers in a predetermined pattern; and  
(b) detecting a spot location where the sample has bound;  
wherein the biochip comprises a storage medium that stores information of the spot locations in relation to information of biopolymers spotted on the spot locations, and  
(c) storing and displaying information of the biopolymer that has bound with a sample molecule by searching in the data stored in the storage medium based on the spot location bound with a sample molecule.

Please add the following new claims:

B4 --9. (NEW) The biochip of claim 1 or claim 2, wherein the information of the spotted biopolymers stored in the storage medium comprises the location, the type or the amount of biopolymer on each spot.

*Sub 7*  
10. (NEW) The biochip of claim 1 or claim 2, wherein the storage medium further comprises a covered surface.

11. (NEW) The biochip of claim 10, wherein the covered surface comprises a plastic or a glass.

12. (NEW) The biochip of claim 10, wherein the covered surface protects the storage medium from exposure to a solution.

*Sub 7*  
13. (NEW) The biochip of claim 10, further comprising a semiconductor memory support.

14. (NEW) The biochip of claim 13, wherein the semiconductor memory support comprises a silicon wafer.

15. (NEW) The biochip of claim 13, wherein the semiconductor memory support is covered.

16. (NEW) The biochip of claim 15, wherein the semiconductor memory support is covered with a resin.

17. (NEW) The biochip of claim 13, wherein the semiconductor memory support is the surface spotted with the biopolymer.

Sub 7  
C7 18. (NEW) The biochip of claim 1 or claim 2, wherein the biopolymer comprises a DNA molecule.

19. (NEW) The biochip of claim 1 or claim 2, wherein the biopolymer comprises a protein molecule.

20. (NEW) The method of claim 7, wherein the storage medium further stores information of the amount of biopolymers spotted on each spot location.

Sub 7  
C8 21. (NEW) The method of claim 7 or claim 8, wherein the biopolymer comprises a DNA molecule.

22. (NEW) The method of claim 7 or claim 8, wherein the biopolymer comprises a protein molecule.--

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## REMARKS

### Status of the Claims

Claims 1 to 8 as filed are pending.

### The Species Election Requirement

The Patent Office has alleged that this application contains claims directed to patentably distinct biopolymer species of the claimed invention as listed in the specification on page 1 in the section entitled "Technical Field":

- species are directed to DNA biopolymers; and,
- species are directed to protein biopolymers.

### The Species Election

In response, Applicants elect species directed to DNA biopolymers.

When the elected species is held to be allowable, Applicants are entitled to consideration (examination) of additional species; if all species are held to be allowable, a generic claim should be allowed. (MPEP §809.02(c); pg 800-50, 8th Edition, August 2001).

### Claims amended and added in the instant amendment

Claims 1 and 5 to 8 are amended and new claims 9 to 22 are added. Thus, after entry of the instant amendment, claims 1 to 22 will be pending.

### Support for claims amendments

The specification sets forth an extensive description of the invention in the new and amended claims. Support for claims directed to various aspects of the biochips of the invention can be found, *inter alia*, on pages 5 to 17 of the specification, and the Figures.

## CONCLUSION

Upon entry of the instant amendment, Applicants believe all claims pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If necessary, please apply additional and necessary charges, and apply all credits, to Deposit Account No. 06-1050.

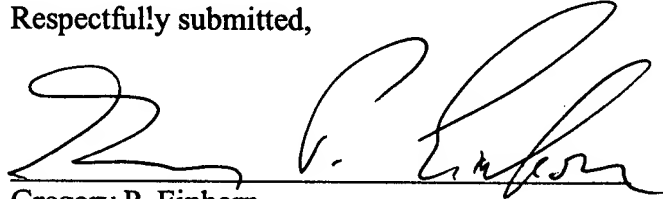
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Attorney's Docket No.: 13-000005001 / PH-661PCT-  
US

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (858) 678-5070.

Respectfully submitted,

Date: Nov. 5, 2001



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